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ABSTRACT

This paper reviews the empirical literature regarding factors associated with the development of Institutional Research (IR) offices in community colleges. The IR office is defined as any organizational unit which has at least one half-time staff member given responsibility for the synthesis and reporting of institutional data, is visibly identified with this responsibility through job description and title, and displays visible products indicating some data handling. Three kinds of descriptive research are considered which demonstrate important factors associated with IR office development: brief case descriptions, national and state-wide surveys, and focused interview studies. A synthesis of this literature reveals that: (1) IR offices have been established in increasing proportions; (2) IR offices seem to operate on a slim proportion of institutional resources, in no case exceeding 1% of total operating budgets; (3) such offices are created by and for top administrators; (4) they require administrative support to be maintained; (5) staff of IR offices are typically small; (6) reporting relationships have been maintained primarily with institutional chief administrators; (7) institutional size appears to be related to the existence of an IR office; (8) various conditions conducive to IR office development can be identified; and (9) IR offices can have considerable room to maneuver. A bibliography is included. (MB)

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Factors Contributing to the Development of Institutional Research and Planning Units in Community Colleges: A Review of the Empirical Evidence

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Since the late 1950's and early 1960's, community and junior colleges have experimented widely with ways to incorporate institutional research and comprehensive planning into the administrative structure of the college.[1] This has been done most visibly through the creation of small centrally located offices responsible for gathering and interpreting various kinds of institutional data.

Given various titles, such offices have attempted to carry out one or another of a cluster of related functions, all elements of a general "rational management" approach to administration. Some such offices have focussed more on long-range and comprehensive planning of educational program, others on instructional research and development, still others on facilities planning or the gathering of systematic evaluative data. Inevitably other functions have been assigned to such offices; such as grants development, public information, or external reporting. Although important differences may exist between offices responsible for "research", "planning", or "research & development", all represent the effort to develop a systematic basis for college management, built on good information about the past, present, and potential functioning of the institution. All may be subsumed within the general category of "institutional research office" (hereafter referred to as "IR Office").

Yet important as institutional research and planning functions seem to be, IR Offices have remained small, marginal, and subject to frequent change, if they have been created at all. It thus becomes particularly interesting to study the process by which IR Offices have developed within community colleges, as the joint result of external conditions, institutional forces, and the efforts of research and planning personnel.

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1 - This paper focusses on public two-year colleges, which for simplicity will be referred to as "community colleges" throughout.

This paper reviews the existing empirical literature regarding factors which are associated with -- and appear to influence -- the development of IR Offices in community colleges. It will be shown that the evidence is at present unsystematic and inconclusive. At the same time, certain factors are identified, which provide a provocative starting point for future organizational research, the results of which may help community colleges do a better job of building the IR function into the structure of the college.

A Need for Descriptive Research on the Development of IR Offices

The higher education literature contains much advice on the establishment of IR Offices. In addition to the classic discussions of institutional research (e.g., Brumbaugh, 1960; Dressel & Associates, 1971) and the accumulating annual proceedings of the Association for Institutional Research, extensive bibliographies have been assembled, such as "An Annotated Bibliography on Establishing an Office of Institutional Research" (Myles and MacClure, 1974). Understandably, the bulk of this literature is prescriptive: it seeks to establish standards, define IR functions, suggest appropriate roles and training arrangements, and generate a rationale for building these roles into the community college administrative structure. The literature is guided by a vision of <u>what might be</u> more than a picture of <u>what is</u> — an appropriate emphasis for the early growth of a new professional specialization.

But for several reasons the prescriptive thrust of the IR literature needs the counterbalance of <u>de</u>scriptive research. Much can be learned from a careful analysis of the experience of those who have experimented with IR roles — analysis which can help paint a picture of <u>what is</u> and <u>what is possible</u>.

Without such research, it is possible that the frustrations of the past several decades will repeat themselves, and that little progress will be made towards realizing the ideals which have guided the development of institutional research. There is also the danger of accepting the conventional wisdom about the establishment of IR Offices as empirical fact.

All prescriptions for the establishment of IR Offices rest on assumptions about the way organizations such as community colleges work. These assumptions may be well founded, but they can and should be verified empirically to the extent possible. In the course of verification, it is also possible that other conditions will appear equally important to the development of IR Offices. Subtle organizational dynamics may become apparent which surround the creation or maintenance of units the business of which is in-house research or planning.

By now considerable experience with IR Offices in community colleges has been accumulated, roughly two decades' worth. That is enough to begin investigating, from an organizational and historical perspective, the kinds of conditions and dynamics surrounding the development of viable IR Offices. This line of research can be broadened further by contrasting the patterns which emerge from it with/ the study of IR Offices which were created but failed to survive. This kind of research can complement the continuing effort to prescribe optimal roles and formats for effective institutional research by pointing out the more pervasive organizational features of the context in which IR Offices operate, not only in community colleges but in other kinds of organizations as well. With guidance from the developing field of organizational theory, models can be constructed which account for the appearance of IR Offices, their growth or demise, and the variations among them. By looking carefully at case accounts of IR Office development, these models can be tested and refined. Variables which account

for the greatest variance in such models will be potentially useful to those who create, staff, or supervise IR Offices, as they search for more effective ways of realizing IR functions.

A first step towards this kind of descriptive organizational research is to synthesize the evidence already collected concerning factors associated with IR Office development. In order to do that, an operational definition of the "IR Office" is essential.

Operational Definition of the "IR Office"

While debate continues over the mission of the IR Office, the proper roles for its staff, and the proper distinctions among its functions, it seems more useful to adopt a broad and generic definition of the IR Office. Doing so captures the diversity of actual IR Offices as they occur in the field, as well as the differences(or lack) in conceptualization among existing descriptive studies. This paper defines the "IR Office" in the community college as any organizational unit which:

a. has at least a half time staff member given primary responsibility for the synthesis and reporting of data about the institution's functioning(IR staff may have other functions as well); [2]

b. is visibly identified with this responsibility through job description and title("IR", "Planning", "Evaluation", "Analysis", or their equivalents should appear in the title, though other labels may also appear reflecting responsibilities unrelated to institutional research;

2 - Note that "external reporting" and "research" both fall in the general category of "synthesizing and reporting institutional data". The degree to which the IR Office undertakes "good research" -- much debated in the literature -- is from the point of view of this definition a variable.

c. displays visible products which indicate that at least some of the data handling responsibilities are being carried out.

At once a host of borderline cases come to mind: the Dean of Instruction whose job description includes institutional research and who manages to conduct some studies; the untitled counselor released part-time to do studies for the college President; the consultant brought in for eight months to do master planning and follow-up research; the Research & Development Coordinator who spends 100% of his time raising grant money from external sources. There is no easy answer to the question of how to classify such people. But the focus of this review is the identification of factors influencing the development of the IR Office as a visible and designated element within the community college's organizational structure. It is by no means the only way to bring about an institutional research program, nor even necessarily the best. But it is the most formalized way of building the IR function into the community college, and as such is subject to the set of conditions and forces which this paper seeks to discover.

Factors Associated with IR Office Development in Existing Descriptive Research

Three kinds of descriptive research in the community college literature yield clues to important factors associated with IR Office development: brief case descriptions, national and state-wide surveys, and focussed interview studies. Each will be reviewed in turn, with a discussion of the quality of the evidence they present.

1. Brief Case Accounts. Though in no way intended as careful or systematic research, brief "testimonial" accounts of specific cases, delivered for the most part at professional conferences, give detail about individual instances of

IR Office development, the tasks performed by IR personnel, and some of the organizational constraints on their activities. Typically, the IR Officer held a staff position reporting directly to the president and performed a range of tasks, including decision-oriented research and the coordination of research reports, along with other tasks not related to research, such as fund-raising. Studies done by the research officer focussed most often on students — for example, follow-up studies or student characteristics profiles -- and least often on teachers' performance and instruction. Several accounts make it clear that institutional researchers experienced resistance, especially from faculty(e.g., Brightman, 1972:34). Some accounts give clues to particular conditions or events which stimulated the establishment of research offices, for example, the recommendation of an accreditation team(Marsee, 1962:34), the building of new campus facilities(Flint, 1962:49), and the existence of specialized sources of external funding(Ellison, 1977:34). One case makes it clear how small a resource commitment the research officer has to work with: ½% of the institutional operating budget(Gold, 1972:46).

But clearly, the generalizability of these case accounts cannot be determined: they are neither complete case histories nor a systematic representation of a known population of community colleges. If anything, they describe arrangements at the more progressive and IR-prone institutions. There is no way of knowing whether the cited factors were the most important ones in a given case, nor how generally such factors were influential.

2. Surveys. A number of large-sample surveys of community college institutional research have been conducted over the past two decades. Though not focussed exclusively on the IR Office rather than the "IR function" or "the program of IR", these studies provide a rough picture of the incidence

of IR Offices over the past several decades, some correlates of their creation, and some of their organizational features. The surveys are divided between those conducted at the state or regional level(Johnson, 1962; Heinkel & Morgan, 1973; Davis and Sparks, 1977; Hazard, 1977; Lach et al., 1977) and those conducted at the national level(Swanson, 1965; Roueche & Boggs, 1968; Pieper,1971; Platt, 1975; Alfred et al., 1977).

From the national surveys we learn that IR Offices were uncommon in 1965 at the time of the first national survey: less than 20% of community colleges responding to the survey had "full-time or part-time coordination of IR" (Swanson, 1965:181). By the operational definition used in this paper, the proportion was probably much lower than 20%, in that many "IR personnel" with part-time responsibility had other administrative assignments which would have consumed almost all of their time and energy, such as Dean of Instruction or Director of Guidance and Counselling. A review of the job titles of respondents suggests that closer to 6% of responding institutions had a staff member one of whose primary concerns was institutional research(based on Swanson, 1965:35-38).

The proportion of community colleges nation-wide with IR offices appears to have risen gradually over the ensuing years. Though the figures include private junior colleges(which were found to be less likely to have IR Offices), one study reported 16% of responding institutions with "personnel hired to coordinate IR"(Roueche & Boggs, 1968:44-45) and another three years later noted 16% "reporting an IR Office"(Pieper, 1971: 7). By the mid-1970's, surveys found 39% of responding community colleges "with an institutional research program"(Platt, 1975:30) and more recently, 55% "having research offices" (Alfred et al., 1977:32). The data from these latter two studies, based on low response rates without check for non-response bias, are probably not too accurate; in all likelihood, the estimates are high. Still, it seems safe to

conclude that the proportion of community colleges within the nation as a whole has increased in the last decade and a half, but at the present time remains less than half of all community colleges.

Within-state surveys carried out in the last half-dozen years show considerable variation among states; but a proportion of colleges approaching one-third have had, in recent years, an IR Office apparently conforming to the present operational definition: 32% of California districts "with research personnel devoting 50% or more of their time to research"(Heinkel & Morgan, 1973:2); 62% of Ohio's two-year autonomous institutions with "an established office of research"(Hazard, 1977); 18% of Georgia's public community colleges with "a Director of Research"(Davis & Sparks, 1977); 33% of Illinois' public community colleges with "research personnel devoting 50% or more of their time to the IR function"(Lach, et al., 1977).[3]

Although the surveys tended to focus broadly on the institutional research function, some of the findings suggest correlates of IR Office development. In one case, institutional size and gross income were positively correlated with the number of institutional research studies done annually(Rouche & Boggs:47); the survey did not determine whether the number of studies correlated with the existence of an IR Office. In another study, a minimum size of college (enrollment of 800) was associated with the existence of any institutional research activity(Swanson, 1965:184). Two of the national surveys report evidence directly linking enrollment size with the existence of an IR Office (Pieper, 1971:5; Alfred, et. al., 1977:33): the larger the institution, the more likely the IR Office. Institutional age was found to bear little

3 - In the case of California, those "IR Personnel" devoting "less than 50% of their time to research" were for the most part only marginally involved with research and tended to be line administrative officers such as Deans of Instruction(see Heinkel & Morgan, 1973:7). I have assumed that the same is true of Illinois. In both cases such people are excluded from my percentage calculations.

relationship to institutional research activity(Rouscbe & Boggs, 1968:47;Swanson, 1965:185). Possibly correlated with a size effect, multiple-campus districts within one state were found to be more likely to have a full-time IR coordinator than single-campus districts(Heinkel & Morgan, 1973:2).

Though no data were provided to substantiate their assertions, several of the survey investigators pointed to the important role of two more factors in the establishment of IR Offices: the support of the college president or Chancellor(Rouscbe & Boggs, 1968:53) and the commitment of college faculty (Swanson, 1965:188).

In addition to identifying factors associated with IR Office establishment, the surveys provide some descriptive data about the IR Office itself: its typical size, reporting relationships, and mixture of functional responsibilities. The size of IR Offices in public community colleges has tended to be quite small: on average, one professional person(full or part-time) with one clerical assistant(Pieper, 1971:26-27). Several surveys indicate that most IR Offices report directly to the chief administrator(e.g., Swanson, 1965:39; Hazard, 1977; Lach et al., 1977), although this relationship may not indicate very high prestige(see Gross, 1977:5). Finally, it is clear that designated IR personnel tend to perform multiple functions, many of which are not considered to be "research". It is a continuing theme in discussions of institutional research that IR personnel spend large amounts of time handling "clerical" functions such as the answering of external questionnaires while spending relatively little time performing decision-oriented research, well documented in one of the recent national surveys(Alfred, et al., 1977:33). One might add that increasing external demand for institutional data is probably an important factor in the establishment of IR Offices, even though such routine data-handling is far from the higher aspirations of the institutional research movement.

For several reasons, the survey evidence must be treated as inconclusive, with respect to the focus of this review on factors associated with IR Office establishment. First, the surveys tended not to investigate the effects of non-response on survey findings, an essential consideration in that response rates were in most cases low. In two instances, limited efforts were made to ensure that responding sample resembled the total sample in terms of enrollment size distributions(Pieper, 1971:4), or in terms of size, region, and age (Swanson, 1965:24-30). But one is left wondering whether responding samples systematically differed from / total samples on other variables more central to the IR Office development process. In several other cases, response rates were high enough to make non-response bias relatively insignificant(Roueche & Boggs: 38; Heinkel & Morgan, 1973).

Second, the lack of a common variable of interest(for which the surveys are not to be faulted) or a precise operational definition of "IR Office" makes it difficult to synthesize findings from different surveys. Several studies focussed on "the IR Office", while others took "the program of IR", the number of IR studies per year", or the existence of "positions responsible for IR " as the variable of interest. A recent review of the survey evidence appropriately noted the danger in trying to establish accurate trends from the surveys' findings(Gross, 1977:1).

Third, in the more recent surveys, one may begin to question whether the college — as opposed to the district or parent institution[4] — is the most appropriate unit of analysis. Increasingly, community colleges are part of multi-campus arrangements — for example, over half of California's community colleges are part of multi-campus districts, in contrast to a decade ago when

4 - As in Ohio, in which a number of two-year public institutions are satellites of larger institutions such as Universities, yet still serving primarily a "community college" function(see Hazard, 1977).

there were practically no multi-campus districts. Institutional research or planning offices are by their very nature centralized units, and one would expect to find them, if they exist at all, at the center of the organizational entity which they serve. The existence of an IR Office in the District Administrative Office, for example, might well reduce the likelihood of IR Offices at each campus. In this case, the proportion of campuses with IR Offices would be a less meaningful indicator of the diffusion of formal IR arrangements.

One further limitation of the survey evidence deserves comment: in their search for the average result, the profile of the "typical" institutional researcher or research office, these studies have tended to downplay the considerable variation in function and organizational form which IR Offices display. Given the present limited understanding of the forces acting on IR Offices, it seems important to conduct descriptive research which looks more systematically at the variation among IR Offices, and at the kinds of forces which bring about that variation.

3. A More Intensive Study of IR Office Development. One recent study helps to identify further the factors affecting internal research office development(Chick, 1974). This study examined IR Office development in eight midwestern community colleges through a combination of surveys and site visits. Based on the perceptions of key participants(research officers and the primary users of their research reports), the study found that (a) the research offices were created in response to a specified administrative need for data, and (b) office creation was done unilaterally by top administrators to "serve their own needs". At the same time, research directors were described as having considerable influence over the choice of research projects, which suggests that once created the IR Office gained some autonomy from top management.

Other findings supported those of the state and national surveys. A considerable proportion of IR personnel's time was devoted to "non-research activities", in particular to grant applications and external agency information requests. In no case did the IR Office's budget exceed 1% of the total institutional operating budget. Typically, those in charge of institutional research reported to the college president. IR Office staffs were small: usually one professional and one secretarial or clerical person.

One provocative finding suggests another factor related to IR Office development. The existence of the IR Office was felt by most respondents to enhance the image of the college to the public in its local community, where before IR Office development, inconsistent messages had been conveyed to the community "resulting in public confusion and embarassment for the college community" (Chick, 1974:9). It is possible that a lack of local confidence in the college acts as one stimulus to the establishment of an IR Office, even though its subsequent unofficial "public relations" function is not the primary rationale for its creation.

Although able to achieve a finer degree of detail than the surveys, the Chick study leaves one with numerous questions. For example, what kinds of "administrative needs" were top administrators responding to in their initial moves to create IR Offices -- internal coordinative problems, external pressures on the institution, or some combination? Once created, how did demands on the IR Offices change, and how did IR personnel respond to these demands? Did the eight IR Offices differ significantly from one another in organizational form or mixture of functions, and did these differences seem to be associated with particular forces or conditions? Finally, the basis of insitutional selection is never clarified: one is left wondering

whether conditions which spurred the development of IR Offices in these eight cases applied more broadly to a defined population of community colleges, one including comparable institutions which never created IR Offices, or did so but subsequently eliminated them.

4. Summary of the empirical evidence. To synthesize from this literature what can be learned about IR Office development in community colleges, it appears that (1) IR Offices have been established in a gradually increasing proportion of community colleges, perhaps approaching a third of all public community colleges at present. (2) IR Offices seem to have operated on a slim proportion of institutional resources, in no reported case exceeding 1% of total institutional operating budget. (3) Such offices seem to have been created by and for top administrators, and (4) require their support to be maintained, though little concrete evidence of this is presented in the studies. (5) Staff of IR Offices is for the most part small, typically one professional person and one clerical-secretarial person; (6) reporting relationships have been maintained primarily with institutional chief administrators. (7) Institutional size and the number of campuses within district appear to be related to the existence of an IR Office, while institutional age does not seem influential. (8) Conditions or events conducive to IR Office development may include: pressure by accrediting bodies, changing coordinative needs within the institution, the expansion of the institution, increased external reporting demands, the need for an improved public image, the availability of specialized sources of external funding, the predilections of top administrators, and a favorable climate for research among the faculty. (9) Once created, IR Offices may have considerable room for maneuver, though much of their time is taken up with activities considered unrelated to research.

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